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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,005	09/20/2005	Markus Stahuber	P05,0084	7849
26574 7590 11/21/2007 SCHIFF HARDIN, LLP PATENT DEPARTMENT 6600 SEARS TOWER CHICAGO, IL 60606-6473			EXAMINER GLEITZ, RYAN M	
			ART UNIT 2852	PAPER NUMBER
			MAIL DATE 11/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/530,005	STAHUBER ET AL.	
	Examiner	Art Unit	
	Ryan Gleitz	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-61 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 31-41, 44, 48-56 and 59-61 is/are rejected.
- 7) ☒ Claim(s) 42, 43, 45-47, 57 and 58 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/16/07; 3/31/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "openings" in claim 33 (only a single opening 92 is shown), the "ozone filter" in claim 35, and the "fan" in claim 36 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 32 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s) or amend the claim(s) to place the claim(s) in proper dependent form.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-34, 39, 49-51, 54, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200).

Iwata discloses a system for transfer printing of an electrostatically charged toner image in an electrographic printing or copying device. A copy machine (2) performs image formation, abstract line 8, which requires an intermediate carrier with an electrostatically charged toner image thereon which transfers the toner image onto a recording medium at a transfer printing region.

The recording medium lying on a conveyor belt (30) which transports the recording medium, as shown by figure 1, through said transfer printing region and along a guided transport section where it is conveyed to a fixing device (4). The guided transport section being arranged in a transport unit, the area outside of the fixing unit (1) as shown in figure 1, and the fixing device (4) being arranged in a fixing unit (1). The

transport unit and fixing unit being used independent of one another and removable from the printing or copying device.

Duct (28) of the fixing unit (1) is at least one wall designed as a hollow chamber profile which hinders a heat transfer from the fixing unit to the transport unit.

Regarding claim 33 and 34, duct (29) has an opening on each end, which reads on openings through which air is drawn to cool the transport unit. Figure 1 shows that the openings in the hollow chamber profile (29) are arranged such that air is taken up into the hollow chamber profile (29) from an environment of the conveyor belt (30).

Regarding claim 39, figure 1 shows that after the fixing device (4) there is a space, which reads on a free transport section in which the recording medium can freely arch.

Regarding claim 49-51, 54, and 61, the system discussed above also reads on the method as claimed.

Iwata does not disclose that the recording member adheres to the conveyor belt due to electrostatic forces.

However, Oyama discloses a similar conveyor belt (2) that is an electrostatically-chargeable conveyor belt and the recording medium adhering thereto due to electrostatic forces and which transports the recording medium. See col. 1, lines 50-55.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the conveyor belt of Iwata to be electrostatically charged so that recording media will adhere to the belt.

Claims 35 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Okubo et al. (JP 02-297572).

Iwata and Oyama disclose the system and method above, but do not disclose an ozone filter.

However, Okubo et al. disclose a similar fixing device including a duct (20) to draw air away from the fixing device that includes in which an ozone filter (17) is provided to filter the air taken up into the hollow chamber profile (20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fixing device and method of Iwata and Oyama with the ozone filter disclosed by Okubo et al. to keep ambient environments clear. Abstract, line 1.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Lee et al. (US 5,589,923).

Iwata and Oyama disclose the system above but do not disclose a fan that runs for a predetermined time after deactivation of the printing or copying device.

However, Lee et al. disclose a fan that is turned off after a given time period passes while in a stand-by state, col. 1, lines 43-46, which reads on the fan running for a predetermined time span after deactivation of the printing or copying device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwata and Oyama to include a fan in the hollow chamber profile to help cool the fixing device and to have the fan run only for a predetermined time after deactivation of the printing as taught by Lee et al. to obtain energy star compliance. See col. 1, lines 23-52.

Claims 37, 38, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Hiroshima et al. (JP 02-148074).

Iwata and Oyama disclose the system and method above but do not disclose that the belt comprises polyvinylidenefluoride.

However, Hiroshima et al. disclose a similar conveyor belt formed from polyvinylidene fluoride, abstract, line 11, that has a volume resistivity in the range of 10^8 to 10^{15} ohm-cm, which reads on the claimed range for specific volume resistance with sufficient specificity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the belt of Iwata and Oyama to be formed of polyvinylidene fluoride as taught by Hiroshima et al. to maintain the transfer function of the belt over a long period. Abstract, lines 1-5.

Claims 40, 41, 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Matsuoka (US 5,530,535).

Iwata and Oyama disclose the system and method above but are silent as to the length of the conveyor belt.

However Matsuoka discloses a similar conveyor belt having two rollers 100 mm apart, col. 8, line 20, and the length of the belt is slightly larger than the distance between the rollers, as shown by figure 1, which reads on a length between 100 mm and 210 mm, which corresponds to at least 1/3 a length of a shortest recording medium to be printed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the belt of Iwata and Oyama to be the length taught by Matsuoka to support the paper during toner transfer.

Claims 44 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Sasaki (JP 58-182669).

Iwata and Oyama disclose the system and method above but are silent as to the relative speeds of the transport section and fixing device.

However, Sasaki discloses a conveyor belt (12) and fixing device (16, 17) wherein the speed of the fixing device is 95% or more of the speed of the conveyor belt, abstract, lines 8-11.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and method of Iwata and Oyama with the transport and fixing speeds taught by Sasaki to avoid crumpling of the recording medium that could occur if the fixing speed was set too slow. Abstract, lines 1-5.

Claims 48 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (JP 57-189169) in view of Oyama (US 5,655,200) as applied to claims 31-34, 39, 49-51, 54, and 61 above, and further in view of Yamada et al. (US 5,148,224).

Iwata and Oyama disclose the system and method above but do not disclose a discharging device.

However, Yamada et al. disclose a discharging device (19) to discharge toner located on the recording medium.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system and method of Iwata and Oyama with the discharging device of Yamada et al. to discharge the toner on the recording material to remove charge before fixing.

Allowable Subject Matter

Claims 42, 43, 45-47, 57, and 58 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is 571-272-2489. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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